

Application Serial No. 10/678,182
Reply to Office Action dated September 27, 2006

REMARKS/ARGUMENTS

Initially, the Applicant would like to thank the Examiner for the early indication of allowable subject matter, i.e., claims 3-7 and 12-16 have been objected to as being allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. The remaining claims, i.e., claims 1, 2, 8-11 and 18, are listed on the Office Action cover sheet as being rejected. That being said, the Applicant would like to point out that claims 8, 9, 17 and 18 are never listed in any prior art rejection made such that it is believed that the Examiner intended to list these claims with claims 3-7 and 12-16 as containing allowable subject matter. Certainly, clarification in this regard is respectfully requested.

In general, the present invention as covered by claim 1 is directed to a vending machine including a plurality of dispensing units that are adapted to receive product containers from associated stack areas. The vending machine includes a plurality of vend motors connected to respective ones of the plurality of dispensing units. Each vend motor includes a rotatable output for selectively operating a respective one of the plurality of dispensing units to dispense product containers. The vending machine further includes an electronic control unit adapted to control rotation of the output of each of the plurality of vend motors through a desired vend angle. The desired vend angle is established based on the product container to be dispensed. The electronic control unit includes a memory having stored therein various predetermined vend angles corresponding to known product containers, while being programmable to retain supplementary vend angles for additional product containers. Claim 10 presents many of the above described limitations in means-plus-function format. More specifically, claim 10 requires means for shifting the plurality of dispensing units through desired vend angles for dispensing product containers and means for controlling the shifting means, with the controlling means including a memory having stored therein various predetermined vend angles corresponding to known product containers, while being programmable to retain supplementary vend angles for additional product containers.

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On page 2 of the Office Action, the Examiner presents the first of four separate obviousness-type rejections against claims 1-2 and 10-11. More specifically, the Examiner rejects claims 1-2 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Pollock et al. (U.S. Patent No. 6,202,888) in view of Hieb (U.S. Patent No. 7,032,776). The Examiner argues that the more specific limitations found in claims 1 and 10 are taught by Pollock et al. and relies on Hieb ('776) to teach dispensing cylindrical products of varying selected diameters. This rejection is respectfully traversed for the reasons set forth below.

First of all, it should be noted that Pollock et al. does not employ dispensing units analogous to that presented in claims 1 and 10. In contrast to the present invention whereby the dispensing units receive product containers from an associated stack area, the arrangement described in Pollock et al. employs helical coils that are loaded by a technician. Second, while the system described in Pollock et al. may be pre-programmed at the factory with different angles, there is no provision or suggestion that describes programming supplementary vend angles for additional product containers. Hieb contributes nothing to address this particular shortcoming. More specifically, the angles programmed in Pollock et al. do not relate directly to the products being vended, but rather the spacing between the coils of the helical dispenser. That is, the coil spacings establish a set dispensing angle for whatever sized product that can loosely fit between the coils. Thus, each helical coil can accommodate a set range of package sizes. This type of arrangement is common in the art for dispensing chips, candy bars, gum and the like, but not beverage containers. In any case, once a particular coil is employed and the vending machine is pre-programmed at the factory for use with that particular coil, it is not possible to reprogram the vending machine to accommodate a product that cannot be vended with that coil. Instead, the entire coil would need to be replaced. For this reason, this type of machine is designed to work with a certain range of products only and requires a substantial redesign and replacement if new product sizes emerge. In contrast, the present invention can accommodate a wide range of container sizes which are only limited by the size of the stack area. When switching between two standard-sized container, a technician simply need switch to another one of the predetermined vend

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angle programs. If the new container has an unusual or non-standard size, the technician can program a supplemental vend angle. In this manner, no mechanical modifications are unnecessary. Therefore, where the present invention employs a dispensing unit that employs predetermined vend angles corresponding to known product containers and can be programmed to retain other vend angle for additional, new product containers, each dispenser in Pollock et al. has a given coil installed therein with a single, set vend angle for that one coil. Re-programming the vend angle for the same coil would render the unit inoperable.

As outlined above, claim 10 employs means-plus-function language to describe both shifting of the dispensing units and controlling the shifting. M.P.E.P. § 2182 clearly states that the “application of a prior art reference to a means or step-plus-function limitation requires that the prior art element perform the identical function specified in the claim” (emphasis added). The Applicant respectfully submits that the Pollock et al. reference does not employ corresponding structure as set forth in the specification, particularly failing to perform the vend angle supplemental programming and storing functions required by the claims. As discussed above, nowhere in the Pollock et al. et al. reference is there any discussion or suggestion for performing a programming operation to retain supplementary vend angles for additional product containers. Again, once the coil is established, the corresponding, required vend angle is set.

Next, the Examiner rejects claims 1-2 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Pollock et al. in view of Hieb (U.S. Patent No. 6,945,427). As discussed above, the Pollock et al. reference does not disclose an electronic control unit adapted to control the rotation of a plurality of vend motors through a vend angle, with the control unit including a memory having stored therein various predetermined vend angles and being programmable to retain supplementary vend angles for additional product containers. Hieb ('427) does nothing to overcome these shortcomings. Instead, Hieb ('427) is directed to a self-learning depth logic for a multi-depth vendor control. More specifically, Hieb ('427) includes a controller that compares the occurrence of products actually dispensed to product depth settings assigned to a product dispensing

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assembly. In any case, the Examiner appears to only rely upon Hieb ('427) to teach the stack areas missing from Pollock et al. et al., as well as a controller operable in various routines, such as test, set selection, depth and set package-routines. That being said, while Hieb ('427) has some discussion to depth, the Applicant is unclear as to where in Hieb ('427) there is any teaching to the test routine or the set package routine claimed. With regard to claim 10, again it is important to note that M.P.E.P. § 2182 clearly states that the application of a prior art reference to a means or step-plus-function limitation requires that the prior art element perform the identical function specified in the claim. Neither of the prior art references relied upon by the Examiner performs a function even remotely similar to that claimed.

The Examiner next rejects claims 1-2 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Suzuki (U.S. Patent No. 6,561,380) in view of Pollock et al. Contrary to the position taken by the Examiner, the Suzuki reference does not teach that a desired vend angle for each of the plurality of vend motors can be individually set. Suzuki simply teaches a product delivery device that employs a cradle-type arrangement to release product containers. Once again, the Examiner appears to rely on Pollock et al. to teach the particulars of the control. As discussed above, the Pollock et al. reference does not disclose an electronic control unit adapted to control the rotation of a plurality of vend motors through a vend angle, with the control including a memory having stored therein various predetermined vend angles and being programmable to retain supplementary vend angles for additional product containers. With regard to claim 10, the Applicant once again directs the Examiner's attention to M.P.E.P. § 2182 which clearly states that application of a prior art reference to a means or step-plus-function limitation requires that the prior art element perform the identical function specified in the claim. None of the prior art relied upon by the Examiner functions even remotely similar to that claimed in connection with the present invention.

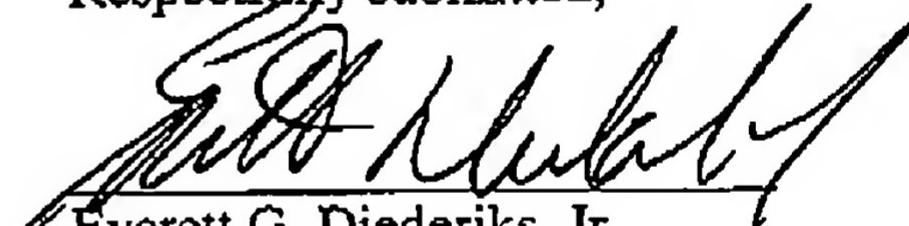
Finally, the Examiner rejects claims 1-2 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Pollock et al. in view of Feltrin (U.S. Patent No. 5,799,823). As discussed above, Pollock et al. et al. does not teach the elements of the claim as indicated

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by the Examiner. Feltrin does nothing to overcome the shortcomings of the Pollock et al. et al. reference. The Examiner relies upon Feltrin to teach a plurality of column walls that define stack areas for storing columns of product containers to be vended. Still, the combination fails to teach the memory having stored therein various predetermined vend angles corresponding to known product containers and being programmable to retain supplementary vend angles for additional product containers. Moreover, as set forth above, Pollock et al. fails to employ corresponding structure to perform the identical function as required when properly interpreting claims under 35 U.S.C. § 112, sixth paragraph.

Based on the above, the Applicant respectfully submits that the present invention is patentably defined over the prior art of record such that allowance of all claims and passage of the application to issue are respectfully requested. If the Examiner should have any questions or concerns regarding this matter, he is cordially invited to contact the undersigned at the number provided below in order to further prosecution.

Respectfully submitted,



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